

Cooperative Vehicle Highway Automation Systems (CVHAS) Pooled Fund Project

DATE: December 7 & 8, 2000
LOCATIONS: Radisson Hotel Berkeley Marina
200 Marina Boulevard
Berkeley, CA., 94710
And
PATH Headquarters
Richmond Field Station
Richmond, CA

DRAFT MINUTES OF MEETING

DEC. 7TH, 2000

8:30-12:30PM MORNING SESSION AT RADISSON HOTEL BERKELEY MARINA

Welcoming Address

Roy Bushey, Program Manager of Caltrans New Technology and Research Program thanked everyone for attending and kicked off the meeting by providing overview of Caltrans research activities. He asked for self-introductions from each attendee. Every state DOT member was either familiar with Intelligent Transportation Systems or with the ITS program managers in their State. Roy indicated back in 1989 that the Mobility 2000 organization, that helped spawn ISTEA legislation, was originally focused on research and development of Automated Highway Systems.

Karl Hedrick, Director of the PATH program provided an overview (see the attached PowerPoint Presentation slides) of the University of California at Berkeley PATH (Partners for Advanced Transit and Highways) Program research activities and its direct partnership with Caltrans.

Purpose of Meeting

Greg Larson, Chief of the Office of Advanced Highway Systems, stated the purpose for the meeting:

- Develop draft goals and objectives, and overall vision of the organization
- Agree on the Workplan, including determining how the RFP cycle will operate
- Discuss the strategy for soliciting participation by other stakeholders
- Decide on organizational structure so agree on future meeting dates

Greg introduced Ron De Leon, who serves as the Project Manager of the Pooled Fund Project (Reports to FHWA on the progress of this project).

PRESENTATIONS

CVHAS Past and Present

Steve Shladover, Deputy Director of PATH, gave a comprehensive presentation on past and present CVHAS activities, including the recent Demo 2000 event in Japan. Steve showed a unique and very informative chronological video presentation of the development of vehicle automation from 1939 to present day. See the attached PowerPoint Presentation slides.

National Perspective – “The Intelligent Vehicle Initiative’s relationship to CVHAS”

Bob Ferlis, FHWA program manager of Vehicle Highway Automation Research & Development, presented current activities in the Intelligent Vehicle Initiative Program. Bob indicated that IVI will only address safety and believes the CVHAS pooled fund project will show the vision of the Automated Highway System to Congress. He sees the current infrastructure support activities as the “building block” activities required to move CVHAS forward, such as Sensor Friendly Vehicles and Roadways, Dedicated Short Range Communications (DSRC) and the Infrastructure Consortium pooled fund study. See the attached PowerPoint Presentation slides.

Questions and interest raised -

David Zavattero of Illinois DOT, indicated that the equity issue for consumers is important to address.

Pete Briglia of Washington DOT and Michael Akridge of Florida DOT expressed interest in reaching deployment sooner or getting a “roadmap” towards deployment.

IVI Sensor Friendly Vehicles and Roadways Project

Jim Misener, Principal Development Engineer at PATH provided overview of Sensor Friendly Vehicles and Roadways (SFVR) Project and the promising technologies that were tested; Light Emitting Diode Brake Messaging (Vehicle-Vehicle Cooperation application), Passive License Plate (Forward Collision Warning application), Fluorescent Paint (Lane Control application) and Corner Cubes (Curve Warning Markings, identifying overpasses for forward ranging sensors, Lane Control, etc.). Jim indicated that GM and Ford have strong interest in getting the SFVR report and findings for their ACAS project, \$35 million budget. [Note that the ACAS project only involves GM, not Ford, although both have interest in the SFVR work.] See the attached PowerPoint Presentation slides.

Questions and interest raised -

David Zavattero, indicated that an Illinois DOT Rail-Highway intersection project has shown that the radars for the project give false warnings and was interested in the results of this IVI project.

State DOT CVHAS Activities

Each State DOT gave a short talk on current CVHAS activities or the reason for interest in the project

Pete Briglia, ITS Program Manager, Washington DOT

No current activities. Interests are in deployment of systems, Field Operational Tests, including proof of concept, and monitoring of ongoing ITS activities. Interest sparked from the Arizona DOT report on “reduced lane widths”. Possible corridor application on 16 miles of Interstate 5 through Seattle that has reversible HOV lanes. Sees the potential of applying Vehicle Automation in Commercial Vehicle and Transit applications.

Richard Manser, Utah DOT

No current activities. Richard indicated that he is the ITS manager and works under Operations. Utah’s Executive Director, Tom Warner, is on the ITS America Board, so there is support for ITS and Automation in the State. Interested in Advanced Snowplow Project and Commercial Vehicle application and potentially on I-15 corridor through state to get additional capacity.

Bill Gardner, Minnesota DOT

Active in CVHAS, where Minnesota DOT is the project manager of the IVI- Advanced Snowplow project. They have a 50 mile test site on existing State Highway with plans for developing Emergency Vehicle, Transit and Commercial Vehicle automated lane applications. Interested in narrow lanes for buses on highway shoulders, FOTs and Demos. Interested in near term deployment. Indicated that Traffic Engineers need to be involved.

Ernie Perry, Missouri DOT

No current activities, but interested in monitoring other areas of ITS activities. Involved in current or “traditional” ITS activities, such as ATMS and surveillance.

David Zavattero, Illinois DOT

No current activities. Interested in the potential Commercial and Transit automation applications especially for the Port of Chicago (3rd Largest in Nation) and Intermodal Container Movement Truckways (12 terminals connected). Interested in the Rotterdam case. Other ITS activities include Rail-Highway Intersection Project and In-Vehicle Warning, Personal Rapid Transit, I-Pass (Electronic Toll Collection), and HELP/PrePass. Indicated that there was an RFP out looking at Commercial Vehicle Platooning through Gary, Chicago and Milwaukee corridor. Interested in an Interstate 65 trade corridor CVHAS deployment site. Transit Automation potential working with Chicago’s RTA and Chicago Transit Authority on Lake Front Busway. Illinois DOT wants to be a champion.

Michael Akridge, Florida DOT

Project Manager involved in CVISN and CVO. Familiar with Mack Truck and McKenzie IVI project, Intermodal and Multi-modal issues, and Daimler-Benz Chauffeur Project. Participant at one time in the I-10 automated dedicated truck lane project. However, indicated that I-10 through Florida did not have the heavy truck traffic volumes that would warrant participation (Lane miles were used in study as opposed to truck volume). Indicated that there was an AASHTO meeting this week to discuss the I-10 pooled fund project. Florida appears to have more interest in truck automation for their I-4 corridor, where they have heavier truck volumes.

Greg Larson, Caltrans

Active in CVHAS, indicated that Caltrans was involved in the NAHSC, continued through pooled fund projects such as Advanced Snowplow project, Infrastructure Consortium, Transit IVI, Bus Rapid Transit and Truck and Bus Automation. Sponsors PATH program and UC Davis AHMCT (Advanced Highway Maintenance and Construction Technology) work in Specialty Vehicles, Trucks and Buses. Big project is DEMO 2002 to be held in San Diego that shows Bus and Truck automation.

Tim Wolfe, Arizona DOT

Active in CVHAS. Current activities include Advanced Snowplow Project pooled fund, VISTA project, Corridor Concept testbed and Transit Automation (CIVIS – Renault Bus Automation). There is a sales tax increase for the “4 corners” of Phoenix with plans for 2002 to do New BRT using existing HOV lanes, new Park-n-Ride lots, and new buses, and by 2003, to possibly convert BRT to Light Rail. Also, involved in Enterprise, ATIS, and HELP projects.

[Note that a majority of State DOT members indicated an interest in Commercial Vehicle or Heavy Truck and Transit Bus Automation.]

2:00 – 5:00PM AFTERNOON SESSION AT PATH HEADQUARTERS - RICHMOND FIELD STATION AND BUILDING 451 CONFERENCE ROOM

PATH Facilities Tour at the Richmond Field Station

Steve Shladover and PATH staff provided tour of the vehicle automation research facilities. Provided rides on automated Buick Cars showing platooning and merging and precision docking. Showed Human Machine Interface Simulation, Automated Heavy Truck and Advanced Rotary Plow.

Workshop Session Begins

Because of strong interest in tour, workshop session started late.

Roundtable open discussion regarding University contracts.

Florida DOT indicated that they have problems with contracts with different Universities.

Support Legislation versus Lobbying – fine line between education and asking for appropriate legislation or earmarking.

Can we do this? Investigate through the Advanced Transportation System Committee of AASHTO?

How about ITS America, and Official Advisory role to US DOT? There is the Federal Advisory Committee Act.

PNGV? Alternative Fuels program

Goals:

- Enhanced mobility
- Economic improvements, especially for freight movement
- Quality of life
- No consensus on level of emphasis on environmental improvements and congestion reduction

Objectives:

- Develop deployment roadmap
- Develop tools for planners to incorporate CVHAS in their plans, with benefit and cost information

Should we have a TAC?

- Involvement?
- Conflict of Interest?
- Expertise is not available in all organizations.
- Proposer versus Proposal Reviewer

RFP Process?

RFI first to get ideas only with no scope of work

Annual Solicitation of Proposals or Ideas

Primarily relatively small, limited-duration projects

Private Sector Membership?

END OF FIRST DAY

DEC. 8TH, 2000

8:00 AM-12:00 PM - RADISSON HOTEL BERKELEY MARINA

Workshop Session Continued

Began discussion on Private Sector Membership and Non-Profit Corporation:

- John West discussed the potential for a future organization change for the CVHAS Pooled Fund Project to a long-term pooled fund project or a non-profit corporation
- John West and Greg Larson discussed the potential for bringing private sector membership into the CVHAS Pooled Fund Project
- Potential Membership Groups were identified:
 - ASTM, SAE and IVI steering groups
 - Ex-officio members
 - Seeking industry developers of products and systems, not consultants who are looking for work
 - Current member states to outreach to neighboring states and ITS America chapters in their states
- Need to get the additional members (Maryland, Georgia and New York) involved before deciding on fundamental structural question of classical pooled fund project, non-profit organization or a hybrid structure.
- Ernie Perry, Missouri DOT indicated that Disabled and Elderly groups should be involved at some point. It's not clear if ITS America or U.S. DOT has included these groups in ITS development activities. It was indicated that NAHSC included AARP representative, but technology was seen as not applicable, possibly because of NAHSC not having total "act" together, advise that we should be organized first before the "message" can be delivered.
- Outreach and Education program needs to be developed first. This could help attract Private Sector.
- Bill Gardner of MinnDOT indicated that there should be a vision developed. There needs to be one developed for CVHAS project or Vision "B" as it was called at the meeting, and a broader Automated Transportation Systems vision, or Vision "A" as it is called.
- Bill Gardner was appointed by Greg Larson as the visionary lead to develop Vision A and B. David Zavattero of Illinois DOT and Bob Ferlis of FHWA volunteered to assist in the development of the draft.
- Greg Larson is the chair of PSC, and Tim Wolfe agreed to be the vice-chair.
- **The group agreed to deviate from the meeting schedule and finish up minor agenda items first and then complete the CVHAS RFP Schedule and Workplan draft and action lists before end of meeting.**

Meeting Schedule for PSC was drafted as follows:

ITS America Conference, Miami

Transportation Research Board, Washington D.C.

ITS America Conference, Long Beach

Demo 2002, San Diego

June 2001

January 2002

April 2002

August/September 2002

Administrative Items –

Ron de Leon, briefly went over Travel Expense Claim (TEC) requirements.

Began editing and drafting CVHAS RFP Schedule and Workplan

See attached CHVAS Pooled Fund Study Workplan

The State DOT members agreed to do two things to get a “fast track” project started sooner and at the same time solicit research proposals. (1) One *FAST TRACK PROJECT - CONCEPTUAL STUDY INCLUDING CASE STUDY SITES WITH FOCUS ON COMMERCIAL VEHICLES AND TRANSIT AUTOMATION APPLICATIONS – Draft descriptions of case study sites due Jan. 15, 2001. (2) The schedule will be followed and it was indicated that this solicitation will BE YEAR 2 PROJECTS. Draft problem statements due by Jan. 31, 2001, 1 paragraph page.

ACTIONS

- Bill Gardner, Minnesota DOT, and his team will have Vision Statements completed by
- Feb. 1st, 2001
- Provide TAC members names to Caltrans by Dec. 31st, 2000
- Problem Statements from each state for “2nd Year” Solicitation due by Jan 31
- Case Study sites due by Jan. 15 for Fast Track Project- Conceptual Study
- Call other State DOTs (Georgia, Maryland, and New York) and provide short brief on what went on.